

# Vinson & Elkins

ATTORNEYS AT LAW

VINSON & ELKINS L.L.P.  
THE WILLARD OFFICE BUILDING  
1455 PENNSYLVANIA AVE., N.W.

WASHINGTON, D.C. 20004-1008

TELEPHONE (202) 639-6500

FAX (202) 639-6604

WRITER'S TELEPHONE

(202) 639-6585

July 8, 1996

The Assistant Commissioner for Patents  
Washington, DC 20231

RE: Information Disclosure Statement  
Appl. No.: 08/631,751  
Filed: April 10, 1996  
For: **Microfabricated Flowthrough Porous Apparatus for Discrete  
Detection of Binding Reactions**  
Inventor: Kenneth L. Beattie  
Our Ref: HARC00001

Sir:

The following documents are being forwarded herewith for appropriate action by the U.S. Patent and Trademark Office:

1. Information Disclosure Statement;
2. List of References Cited by Applicant;
3. References AA1-AE1, AL1-AO1, and AR1-AT4; and
4. One (1) return post card acknowledging receipt of the above documents by the U.S. Patent and Trademark Office.

It is respectfully requested that the enclosed postpaid post card be stamped with the date the enclosed documents are received by the PTO and that it be returned as soon as possible.

The Assistant Commissioner for Patents  
July 8, 1995  
Page 2

The Assistant Commissioner is hereby authorized to charge any fees to our Deposit Account No. 22-0365. A duplicate copy of this letter is enclosed.

Respectfully submitted,

Vinson & Elkins L.L.P.

A handwritten signature in black ink that reads "Michael A. Sanzo". The signature is written in a cursive style with a long, sweeping underline.

Michael A. Sanzo  
Attorney for Applicant  
Registration No. 36,912

MAS:ct  
Enclosures

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Kenneth L. Beattie

Appl. No. 08/631,751

Filing Date: April 10, 1996

For: **Microfabricated, Flowthrough  
Porous Apparatus for Discrete  
Detection of Binding Reactions**

Art Unit: 1211

Examiner: to be assigned

Atty. Docket: HARC00001

**Information Disclosure Statement**

The Assistant Commissioner for Patents  
Washington, DC 20231

Sir:

Submitted herewith is a listing of documents known to applicant and/or his attorney in compliance with the requirements of 37 C.F.R. § 1.56. Copies of the listed documents are also enclosed. In accordance with 37 C.F.R. § 1.98(a)(3), applicant's undersigned attorney submits that the following concise explanations of the relevance of the non-English language documents cited on the accompanying form:

Reference AL1, European patent document 347,579, discloses a micro-mechanical plate with cavities made by etching. The plate is made of crystalline semiconductor material and can be used for the storage and handling of samples. An English language abstract of this document is cited on the accompanying form as document AS4.

Reference AN1, German patent document 3,801,987, discloses a carrier of controlled pore size for nucleic acid reactions by chemical or enzymatic methods, e.g., ligation or

oligonucleotide synthesis. An English language abstract of this document is cited on the accompanying form as document AT4.

Applicant does not waive any rights to appropriate action to establish patentability over any of the listed documents should they be applied as references against the claims of the present application. This statement should not be construed as a representation that more material information does not exist or that an exhaustive search of the relevant art has been made.

Consideration of the cited documents and making the same of record in the prosecution of the above-captioned application are respectfully requested. It is believed that no fees are due for consideration of this Information Disclosure Statement. However, any fees which may be due may be charged to our Deposit Account No. 22-0365. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

VINSON & ELKINS L.L.P.

*Michael A. Sanzo*

Michael A. Sanzo  
Attorney for Applicant  
Registration No. 36,912

Date: July 8, 1996

1455 Pennsylvania Avenue, N.W.  
Washington, D.C. 20004-1008  
(202) 639-6585

<b>LIST OF REFERENCES CITED BY APPLICANT</b> <i>(Use several sheets if necessary)</i>				Atty. Docket No. HARC00001		Appl No. 08/631,751	
				Applicant: Kenneth L. Beattie			
				File Date April 10, 1996		Group 1211	
<b>U.S. PATENT DOCUMENTS</b>							
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate
	AA						
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<b>FOREIGN PATENT DOCUMENTS</b>							
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							Yes      No
	AL						
	AM						
	AN						
	AO						
	AP						
<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	AR 3	Kittilsland, Gjermund <i>et al.</i> , "A Sub-Micron Particle Filter in Silicon," <i>Sensors and Actuators A21-A23</i> :904-907 (1990).					
	AS 3	Saiki, Randall K. <i>et al.</i> , "Genetic Analysis of Amplified DNA with Immobilized Sequence-Specific Oligonucleotide Probes," <i>Proc. Natl. Acad. Sci. USA</i> 86:6230-6234 (1989).					
	AT 3	Southern, E.M. <i>et al.</i> , "Analyzing and Comparing Nucleic Acid Sequences by Hybridization to Arrays of Oligonucleotides: Evaluation Using Experimental Models," <i>Genomics</i> 13:1008-1017 (1992).					
Examiner				Date Considered			

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<b>FOREIGN PATENT DOCUMENTS</b>							
		Document Number	Date	Country	Class	Subclass	Translation
							Yes      No
	AL						
	AM						
	AN						
	AO						
	AP						
<b>OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
	AR 2	Eggers, Mitchell D. <i>et al.</i> , "Genosensors: Microfabricated Devices for Automated DNA Sequence Analysis," <i>Advances in DNA Sequencing Technology 1891</i> , Proceedings Reprint, SPIE (1993).					
	AS 2	Meier-Ewert, Sebastian <i>et al.</i> , "An Automated Approach to Generating Expressed Sequence Catalogues," <i>Nature</i> 361:375-376 (1993).					
	AT 2	Khrapko, K.R. <i>et al.</i> , "A Method for DNA Sequencing by Hybridization with Oligonucleotide Matrix," <i>J. DNA Sequencing and Mapping</i> 1:375-388 (1991).					
Examiner				Date Considered			

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U.S. PATENT DOCUMENTS								
Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date If Appropriate	
	AA 1	5,244,815	09/14/93	Guirguis	436	530	09/13/91	
	AB 1	5,234,594	08/10/93	Tonucci <i>et al.</i>	210	500.26	06/12/92	
	AC 1	5,188,733	02/23/93	Wang <i>et al.</i>	210	321.84	02/26/92	
	AD 1	5,143,854	09/01/92	Pirrung <i>et al.</i>	436	518	03/07/90	
	AE 1	5,077,210	12/31/91	Eigler <i>et al.</i>	435	176	01/13/89	
	AF							
	AG							
	AH							
	AI							
	AJ							
	AK							
FOREIGN PATENT DOCUMENTS								
		Document Number	Date	Country	Class	Subclass	Translation	
							Yes	No
	AL1	0 347 579	05/16/89	EPO	B01L	3/00	Abstr.	
	AM1	0 505 632	03/28/91	EPO	G01N	33/543		
	AN1	38 01 987	01/23/88	Germany	C12N	11/12	Abstr.	
	AO1	WO 89/10977	05/02/89	WIPO	C12Q	1/68		
	AP							
OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)								
	AR 1	Beattie, Kenneth <i>et al.</i> , "Genosensor Technology," <i>Clinical Chemistry</i> 39:719-722 (1993).						
	AS 1	Drmanac, Radoje <i>et al.</i> , "Sequencing by Hybridization: Towards an Automated Sequencing of One Million M13 Clones Arrayed on Membranes," <i>Electrophoresis</i> 13:566-573 (1992).						
	AT 1	Drmanac, R. <i>et al.</i> , "DNA Sequence Determination by Hybridization: A Strategy for Efficient Large-Scale Sequencing," <i>Science</i> 260:1649-1652 (1993).						
Examiner				Date Considered				

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							Yes	No
	AL							
	AM							
	AN							
	AO							
	AP							

**OTHER PRIOR ART** (Including Author, Title, Date, Pertinent Pages, Etc.)

AR 4	Tonucci, R.J. <i>et al.</i> , "Nanochannel Array Glass," <i>Science</i> 258:783-785 (1992).
AS 4	Dialog abstract of European patent document 0 347 579 (listed above as document AL1), Derwent World Patents Index accession number 90-001005/01.
AT 4	Dialog abstract of German patent document 38 01 987 (listed above as document AN1), Derwent World Patents Index accession number 89-221475/31.

Examiner

Date Considered